

REMARKS

This is intended as a full and complete response to the Office Action dated August 17, 2004, having a shortened statutory period for response set to expire on November 17, 2004. Please reconsider the claims pending in the application for reasons discussed below.

Claims 1-29 are pending in the application. Claims 1-29 remain pending following entry of this response. Claims 1, 9, 11, 14, 22, 24, and 27 have been amended. Applicants submit that the amendments do not introduce any new matter into the application.

Claim Rejections - 35 USC § 112

Claims 9-13 and 22-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner states that claim 9 and claim 22 recite "a node" which lacks context. The examiner proposes that the claims be amended to "a node of a control flow graph." Applicants' have amended the claims to incorporate this suggestion.

Claim Rejections - 35 USC § 103(a)

Independent claims 1, 14, and 27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Borland's, Turbo C++, User's Guide (Borland)* in view of *Kesselman et al.*, U.S. Patent 6,678,884 (*Kesselman*).

Regarding claims 1 and 20, the Examiner asserts that at Page 228 (first through third paragraphs) and pages 237-241) *Borland* discloses the recited limitation of a first task, wherein the first task comprises:

the first task comprises determining a first kill variables set comprising only those variables being monitored by the debugging environment whose value may become out of sync with the value of the variable used by a program being debugged during the execution of the program from a particular point of the program to a breakpoint, wherein the breakpoint can be encountered during execution of the program from the particular point.

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The examiner further asserts that at pages 224-225; page 27 [sic], table; and page 237, fourth paragraph *Borland* discloses the recited limitation of a second task that comprises:

determining a second kill variables set comprising only those variables being monitored by the debugging environment whose value may become out of sync with the value of the variable used by a program being debugged by executing of the statement.

Applicants respectfully disagree.

The Examiner cites material a user's guide for a commercial integrated development environment that includes debugging features. The cited portions disclose how to set breakpoints, run-to break points, single step, and step-into execution functions using the particular commercial product. Additionally, at pages 237-241, the cited material describes how to set a "watch" for a variable of a program being debugged. Using the *Borland* product, a watched variable is monitored by the debugging system and displayed in a window that shows a user the value of a selected variable during program debugging (e.g., during execution up to a breakpoint or during single statement stepping). Nothing in the material cited by the examiner discloses determining a first kill variable set, a second kill variable set, or for that matter *any* kill variable sets as defined by the rejected claims.

As claimed, the kill variable sets are used to update variables during debugging. During debugging, the debugger may maintain a copy of the variables of the program being executed. Further, the debugger may display the value of the copies being watched, from which the current value of the variable may be displayed to a user. The value of the copy used by the debugger, however, may become out of sync with the actual value as the program is executed. Applicants' claim a method of determining which variables to update in a debugging environment (e.g., which copies used by the debugging environment may have become out of sync with the actual variables used by the executing program), and then updating those values. *Borland*, in contrast teaches how to use their product, and nothing about how the product operates "under the

covers," how variables are updated by the debugging system, or even that kill variable sets are used at all.

Similarly, regarding claim 27, *Borland* fails to disclose the recited limitation of executing a task when a run command is received, wherein the task comprises determining a kill variables set comprising only those variables being monitored by the debugging environment whose value may become out of sync with the value of the variable used by a program being debugged during the execution of the program from, and including, a particular statement of the program to a breakpoint that can be encountered during execution of the program from the particular point.

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). See also MPEP § 2143.03. Since *Borland* fails to teach, show, or suggest determining a kill variables set, Applicants submit that *prima facie* obviousness of the rejected claims has not been established. Therefore, on the basis of *Borland* alone Applicants respectfully submit that the rejection is improper and should be withdrawn.

Regarding claims 2-19, 21-29, each of these claims depends from one of independent claims 1, 14, and 27. If an independent claim is non-obvious under 35 U.S.C. § 103, then any claim depending therefrom is non-obvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). The rejection to these claims, therefore, is obviated by the remarks above regarding independent claims 1, 20 and 27.

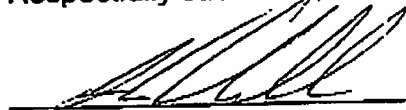
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Conclusion

Having addressed all issues set out in the office action, Applicants respectfully submit that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,



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